



Northern Ireland Sustainable Energy Programme

Annual Report 2020/21

Prepared by Energy Saving Trust

1. Executive Summary

This annual report reviews the performance of the 2020/21 Northern Ireland Sustainable Energy Programme (NISEP) schemes, outlining the measures installed, financial benefits to customers and the energy (GWh) and carbon savings associated.

For 2020/21 the initial NISEP fund was £7,941,946 (as set out in the NISEP Framework Document) collected as an average of £8.87 per electricity customer across approximately 895,014 domestic and business customers. The total NISEP spend on schemes at year end was **£7,983,508**. Additional funding was allocated to 2020/21 schemes during the year, following confirmation of underspend from 2019/20; which was higher than usual as a consequence of the start of the COVID-19 pandemic. To allow Priority customers who had been approved a NISEP grant in 2019/20 but who could not proceed due to COVID-19, Primary Bidders were asked to collate details of all approvals and appropriate funds were then reallocated to these Primary Bidders for their 2020/21 schemes. This meant customers were not negatively impacted and did not have to reapply for a NISEP grant in the new financial year.

COVID-19 continued to have an impact however as there was approximately £844k of NISEP funding which remained unspent at the end of 2020/21. Installations were cancelled across schemes, due to social distancing and isolation requirements in place as well as Primary Bidders being impacted by staff absence. Furthermore, a continued lower uptake in the Non-Priority Category, mainly in commercial schemes, resulted in 96% of NISEP funding being spent in the Priority Category. This is a significant increase to the 80% ringfence for Priority schemes. One impact of this is an increase in the Gross Customer Benefit (GCB) in the Priority Sector and a decrease in the Non Priority Sector. However, overall, the GCB has decreased from the previous NISEP year, as illustrated in Table 1 below, again because of the low uptake in the Non Priority Sector which is known to yield much higher financial savings

due to measure type. Further reasons for the above will be discussed in greater detail within this report.

In total, twenty-five schemes were approved for 2020/21, however, one scheme did not proceed, and three further schemes closed during the year due to no uptake. The funds from these schemes were redistributed to other more successful schemes to try to maximise inyear spend and associated energy savings.

Table 1 – Comparative Summary of Outturn Savings

	2020/21	2019/20
Total lifetime energy savings (GWh)	481.918	368.632
Total lifetime carbon saved (tC)	44,847	46,015
Gross lifetime customer benefits (£)	22,246,594	30,153,911
Total incentives earned (£)	85,644	28,160

2. NISEP background

NISEP is funded from a sum of money collected from all electricity customers through a Public Service Obligation (PSO), and it is used to provide funding for energy efficiency schemes.

The strategic objectives of the NISEP are to contribute to the achievement of:

- Efficiency in the use of energy;
- Socially and environmentally sustainable long-term energy supplies; and
- The above at best value to customers whilst also having due regard to vulnerable customers.

Most of the funding (80%) is ring-fenced for spend for vulnerable customers in Northern Ireland. Previous consultations have substantiated the view that this level of funding for vulnerable customers should remain.

In 2020/21 the NISEP continued to focus on vulnerable customers (known as the Priority Sector) who are domestic customers on lower incomes who may be vulnerable to fuel poverty. £6,157,090 was made available at the start of the year for this sector. The remaining £1,539,272 was split between Non-Priority domestic, commercial and innovative schemes. Additional underspend from 2019/20 was also made available for 2020/21 Primary Bidders to utilise.

NISEP funding for schemes aimed at Priority Sector customers typically provided a package of measures including;

- Fabric (cavity wall or loft) Insulation
- Heating system replacement including fuel switching and heating controls

- LED Lighting
- Hot Water Cylinder Jackets
- Smart Heating Controls
- Reflective Radiator Panels
- Water Widgets
- Heating Additive

The explicit aim of NISEP funding in the Priority Sector is to reduce energy consumption in the least energy efficient housing stock, and to improve energy efficiency levels.

In the Non-Priority, Innovative Domestic and Commercial Category, measures included;

- Insulation 'cash-back' grants for cavity wall and loft insulation in the domestic sector
- Variable Speed Technology
- LED lighting
- Intelligent Heating controls
- High Heat Retention Storage Heaters

3. Types of schemes in 2020/21

In 2020/21, twenty-five schemes were approved, however, one scheme did not proceed, and three further schemes closed during the year due to no uptake. The following tables summarise the number of schemes per Primary Bidder and schemes per category.

Table 3.1 - Summary of approved schemes by Primary Bidder

Energystore Ltd	3
firmus energy (Distribution) Ltd	2
Fusion Heating Ltd	5
Power NI Energy Ltd	8
SGN Natural Gas Ltd	1
Warmfill Ltd	2
Workspace Ltd	1
O'Kane Plumbing & Electrics Ltd	2
Kingspan Insulation Ltd / T/A Kingspan Retrofit / Springvale Insulation Ltd	1

Table 3.2 – Breakdown of schemes by Category

Priority scher	nes			15
Non-Priority	conventional	and	Innovative	10
schemes				

Table 3.3 below shows how the NISEP funds spent were split between each funding category in 2020/21.



Table 3.3 - NISEP Breakdown of Funding Spent (*Figures have been rounded to whole numbers)

4. Priority Domestic Schemes

Of the **£7,983,508** spent, **£7,666,864** was utilised on Priority Domestic schemes (those targeted at vulnerable/lower income), representing 96% of the total funding spent. This is significantly higher than the 80% ring-fenced for priority schemes at the start of the year and is mainly due to funding being utilised where demand was greatest.

In total, Priority funding contributed to **16,260** energy efficiency interventions being installed. This is 2,642 less measures than in the previous year, which is mainly a result of less LEDs (reduced by 3,536 from the 2019/20 year) being installed in properties that received other energy efficiency measures. This was due to COVID-19 restrictions where installers could not enter properties. This reduction in LEDs was mainly offset by an increase in heating installs in the Priority Category. Quarter 4 usually has the highest uptake of measures, so although additional underspend from 2019/20 was allocated to 2020/21 Priority Schemes throughout the year, COVID-19 continued to have an impact to the total number of installs completed and level of funding claimed overall.

In comparing the fuel switch conversions to the previous year, oil to gas remains the highest proportion of all fuel switches completed under NISEP, at 83%, an increase from the previous year. There has also been a small increase in oil boiler replacements but a reduction in

electric (E7) to gas conversions. All other fuel switches have remained at a similar percentage to the previous year.

Five of the fifteen Priority schemes provided a fully funded 'whole house solution' package, whilst five schemes provided different levels of grant funding towards similar measures. This varied from a 50% grant towards heating measures and fully funded insulation for owner occupier / private tenants, to a standard £1,000 / £150 grant towards heating and insulation installs, respectively, for Housing Association tenants. The remaining five schemes provided individual measures including cavity wall and loft insulation, four of which providing 100% grant funding to customers, and one offered a £200 grant for Housing Association tenants. Table 4.1 shows a breakdown of priority measures and Table 4.2 shows the breakdown of heating system installations.

Energy Saving Trust and The Utility Regulator continue to encourage the uptake of the 'whole house solution' package and have issued guidance and further requirements to encourage this uptake. It was communicated to all Primary Bidders that 'whole house solution' schemes should be designed to ensure maximum uptake of measures offered per household, unless there are exceptional circumstances, (i.e., when a heating system is being installed, all insulation measures if required and suitable for the property, should be installed). Customers should always be made aware of the benefits of insulation measures in terms of the energy efficiency improvements they bring.

Energy savings of **392.471 GWh** in the Priority Category represents approximately 81% (up by 21% to the previous year) of the overall energy savings achieved. Total energy savings are higher than in 2019/20, despite the reduced number of measures installed. This increase is mainly attributed to an increase in the number of heating systems installed (by approx. 35%). A higher proportion of funding was also spent in the Priority category where demand was greatest. With the predominant fuel switch being oil to gas conversions, at 83%, in comparison to 76% in 2019/20, this also increased outturn energy savings. As communicated to all Primary Bidders ahead of scheme commencement, schemes converting electric heating to a different fuel source, such as oil or gas, were approved on a case-by-case basis. As electricity generation becomes greener, less energy savings are achieved from this conversion type and therefore this will explain the reduction in electric to gas conversions in 2020/21 from previous years.

There continues to be more partial fill cavity wall insulation installed, with partial fill being the higher proportion in 2020/21 as opposed to full fill. Less energy savings are attributed to partial fill; therefore, this has reduced the energy savings achieved. Ventilation requirements for both loft insulation and cavity wall insulation, continue to impact average measure cost and therefore the number of measures installed.

Measures installed equate to a lifetime gross customer benefit (GCB) of **£16,966,576** for vulnerable households in Northern Ireland. This is an increase of £4.8 million to the previous year and is mainly due to an increase in the number of heating installs in the Priority Category.

Table 4.1 – Summary of Priority Measures Installed 2020/21

Loft insulation (LI) Cavity wall insulation (CWI)	2,169 1,594
LEDs	8,390
Water Widgets	67
Hot water cylinder jackets	153
Heating replacements	1,624
Heating Additive	1,624
Smart Heating Controls	352
Reflective Radiator Panels	287
TOTAL	16,260

Table 4.2 – Summary of Heating Replacements 2020/21

Electric central heating to gas	26
Electric central heating to oil	1
Oil to gas	1,340
Oil to oil (replacement)	177
No heat (electric) to gas	1
Solid fuel central heating to gas	27
Solid fuel central heating to oil	3
LPG to Gas	4
Gas to gas (replacement)	45
TOTAL	1,624

Below is a sample of customer feedback from some Priority scheme recipients, provided by Primary Bidders. (For a full list and detailed description of all NISEP 2020/21 schemes, see Appendix 1).

Thermal Comfort customer - "This was a very easy process with the work carried out in a very timely manner, and the grounds were left spotless. Well Done!."

Northern Ireland Home Insulation Scheme customer - "Extremely pleased with the complete service. The installers were courteous, and informative. They left the house very clean and tidy. The H/O notices an improvement in the comfort level of the house."

Cosy Homes customer - "Much easier to pay for gas with pay as you go meter."

Keep Warm customer - "Great communication & tidy work. Very polite & friendly."

Warm At Home Plus customer - "I had natural gas installed in January 2021. Since then, it has been more satisfactory than my previous oil system. The system provides instant hot water and near instant heat in the radiators."

Better Energy Homes Plus customer - "All work was carried out to a very high standard by very professional and accommodating tradesmen, very happy with the job well done."

Homewarmer Plus customer– "Installers were very pleasant and approachable, Fantastic Job, Difference from having both measures installed has been like night and day."

Energy Plus customer – "The workmen were all very good at their jobs, and were very quick, tidy workers - no mess at all especially careful of my fireplace. Outside pipework is neat and tidy. Everything was very well explained to me about the control unit and how the system operates."

5. Non-Priority and Innovative schemes (Commercial and Domestic)

Of the **£7,983,508** spent, **£316,645** was utilised on Non-Priority and Innovative schemes, representing 4% of the total funding spent, 3% less than the previous year. Non-Priority Commercial schemes provided part-funding, approx. 20%, towards the cost of energy efficiency measures. The Non-Priority Domestic schemes provided a £250 grant towards insulation measures. In 2020/21, High Heat Retention Storage Heaters (HHRSH) were considered in the Innovative category, and only one of the two innovative schemes approved had uptake. This scheme offered a grant of £900 towards High Heat Retention Storage Heaters in tenants.

Commercial schemes tend to be more cost effective than Priority Domestic Schemes due to commercial energy efficiency measures yielding higher energy savings in comparison to spend. Funding was returned by one Primary Bidder at the start of Q4, with further underspend returned for three schemes due to no uptake. This resulted in a £1m underspend in this category, the majority of which was reallocated during the year to the Priority Category to support schemes with large waiting lists where funds had been exhausted. The main reasons for this underspend relate to the type of commercial projects applying for NISEP funding and timescales of the NISEP year. Commercial projects take a longer period to plan and complete and as a result, applications do not progress as swiftly as domestic applications, which then leads to low uptake and underspend at year-end. The current NISEP financial year timeframe continues to provide challenges for the commercial sector. Feedback provided by the Commercial sector was that the impact of Brexit, COVID-19, and energy cost increases, all played a significant role in 2020/21 as to whether they were able to proceed with their NISEP applications through to completion of projects. Energy Saving Trust were informed that the uncertainty stemming from Brexit and the Northern Ireland Protocol was a significant factor to whether they proceeded with their NISEP application because of uncertainty of what the impact of the Protocol may have had on Northern Ireland businesses. This led to decisions to hold off on investments throughout

this period of uncertainty. COVID-19 also led to global supply shortages of electronic components, meaning fewer businesses proceeded with applications. Financial implications due to energy cost increases also meant businesses were not in a position to fully understand the impact to them or their customers in terms of who pays for the increase. This also led to fewer NISEP applications being progressed through to completion. Only 20% of all NISEP commercial applications issued for the 2020/21 year were fully completed, highlighting the level of cancellations due to the reasons outlined above.

In total, Non-Priority/Innovative schemes delivered **6,480** energy efficiency interventions. The number of measures in the Non-Priority/Innovative Category has reduced by 5,383 compared to 2019/20, and this is mainly related to the reduction of LED installs. LEDs have reduced from 11,176 in 2019/20 to 5,884 in 2020/21. When comparing other technologies installed, there is a clear drop in commercial uptake; Variable Speed Technology reduced from 25 installs in 2019/20 to only 4 installs in 2020/21 and similarly, Intelligent Heating Controls reduced from 9 installs to 3 installs.

Although, LEDs continue to be widely adopted by businesses each year, overall, the timeframe for commercial projects to complete and the impact of COVID-19 and Brexit as outlined above, provided a challenging environment for many businesses.

There has been a slight reduction in the number of Non-Priority Domestic insulation measures installed, by less than 88 measures. There were two innovative schemes approved in 2020/21, however, one scheme did not go ahead, with the other innovative scheme installing 24 High Heat Retention Storage Heaters. Energy Saving Trust and The Utility Regulator will continue to encourage innovative schemes to be submitted which would help bring forward emerging but proven domestic or commercial technologies that provide a better energy efficiency performance than 'standard' measures.

Overall, with a reduced number of installs in the Non-Priority/Innovative Category, energy savings have been impacted as a result. Energy savings of **89.447 GWh** in the Non-Priority/Innovative sector represents approximately 19% of the overall energy savings, which is a significant reduction from 40% in 2019/20. Energy savings continue to reduce each year in this category and account for a lower proportion of the energy savings achieved overall. This can be explained by the increased spend in the Priority Category where demand has been highest. In the Non-Priority/Innovative Category, there were notably fewer LEDs, which had the greatest impact but also a reduction in other commercial technologies. This explains the significant lower lifetime gross customer benefit of **£5,280,018**, compared to the previous NISEP year at £18,024,062. The substantial decrease in this category has meant overall, as outlined in Table 1 of this report, the gross customer benefit has decreased from 2019/20 despite the Priory sector achieving an increase.

Table 5.1 – Summary of Non-Priority/Innovative Measures Installed 2020/21

Loft Insulation	101
Cavity Wall Insulation	464
Variable Speed Technology	4
Energy efficient lighting	5,884
Heating upgrade (High heat retention storage heaters)	24
Intelligent Heating Controls	3
TOTAL	6,480

Below is a sample of customer feedback from some Non-Priority/Innovative scheme recipients, provided by Primary Bidders. (For a full list and detailed description of all 2020/21 NISEP schemes, see Appendix 1).

LED Lighting customer - "This project was and is an example of how a well-managed and administered application process should be."

Intelligent Heating Controls customer- "The NISEP grant funding for the Intelligent Heating Control system enabled the hotel to proceed with the project. To date, we are delighted with both the efficiencies and substantial units of energy saved, crucial in such an expensive energy market. In addition, the system has enabled us to improve the guest experience, since we are not better able to regulate bedroom temperatures."

Variable Speed Technology customer - "Very efficient and courteous service."

Keeping You Warmer customer - "If grant wasn't available then we would have had to do without as we would not have had all the money to get it done. Very grateful for the grant ... Excellent work."

£250 Insulation Cashback customer - "Whole process very easy - have already recommended to a neighbour."

6. Utilisation of NISEP Funding 2020/21

Table 6.1 below shows a summary of the approved schemes this year along with NISEP funding spent, GWh lifetime energy savings, lifetime carbon savings per tonne and the gross customer financial benefit of each scheme. The graphs provide a breakdown of GWh savings by category and the overall cost effectiveness of each scheme in pence spent per kilowatt of energy savings generated (where the lower the pence per kilowatt figure, the more cost-effective the scheme).

Table 6.1 - Scheme Summary

Scheme Ref	Scheme Title	NISEP Funding Spent £	Accredited Lifetime Energy Savings GWh	Lifetime Carbon Saved Tonnes	Gross Customer Lifetime Benefit £
				5 204	62 420 045
ESL 20 01 IP	Thermal Comfort	£1,102,696	66.664	5,291	£2,429,045
ESL 20 02 NP	£250 Insulation Grant	£150,750	40.486	3,213	£1,460,540
	Housing Association Comfortable	c2 200	0 1 2 0	10	C2 705
ESL 20 03 IP	Living	£2,200	0.120	10	£3,795
FIR 20 01 MP	Home Comfort Plus	£678,290	34.234	3,733	£1,616,421
FIR 20 02 MP	Home Comfort 50/50	£371,988	34.740	3,759	£1,690,174
FUS 20 01 MP	Energy Plus	£1,437,378	50.244	5,501	£2,417,153
FUS 20 02 MP	Energy Plus – Efficient Oil	£525,492	5.551	451	£252,188
FUS 20 03 MP	Energy Saving Home Assist	£302,053	24.141	2,639	£1,125,081
FUS 20 04 MP	Housing Association Energy Saver	£109,231	16.998	1,933	£755,950
FUS 20 05 M NP	Housing Association - Efficient Electric	£23,800	0.323	27	£22,311
FU3 20 05 IVI INP	Northern Ireland Home	£25,000	0.525	27	122,511
KING 20 01 I P	InsulationScheme	£487,832	21.032	1,669	£805,999
OKPE2001 MP	Better Energy Homes Plus	£436,562	10.336	907	£465,174
OKPE2002 MP	Better Energy Homes Cashback	£63,431	2.677	253	£119,908
			12.941		
PNI 20 01 MP	Cosy Homes	£114,046		1,451	£571,084
PNI 20 03 L NP	LED Lighting	£113,758	37.112	2,945	£3,100,825
PNI 20 04 O NP	Intelligent Heating Controls	£5,537	4.008	318	£115,404
PNI 20 05 O NP	Variable Speed Technology	£10,054	5.409	429	£500,072
PNI 20 06 O NP **	Voltage Optimisation	£0	0	0	£0
PNI 20 07 O NP **	Robox Energy Screw Compressor	£0	0	0	£0
PNI 20 08 O NP **	Heat Recovery	£0	0	0	£0
PNI 20 09 O NP *	Heat Pumps	£0	0	0	£0
SGN 20 01 MP	Warm at Home Plus	£683,794	36.388	4,086	£1,670,595
WFL2001INP	Keeping You Warmer	£12,745	2.109	167	£80,865
WFL20021P	Homewarmer Plus	£541,544	22.956	1,822	£921,723
		,	53.449	4,242	, -
WORK 20 01 IP	Keep Warm Scheme	£810,327			£2,122,286
	TOTALS ***	£7,983,508	481.918	44,847	£22,246,594

* scheme did not go ahead; funds were returned to the NISEP pot for reallocation

** scheme proceeded but had no uptake; funds were returned to the NISEP pot for reallocation

*** where relevant, total figures have been rounded

There were four schemes allocated funding at the start of the NISEP year, where one did not go ahead (PNI 20 09 ONP Heat Pumps) and three had no uptake and closed during the year, (PNI 20 06 O NP Voltage Optimisation, PNI 20 07 O NP Robox Energy Screw Compressor, PNI 20 08 O NP Heat Recovery). These funds were returned to the NISEP pot for reallocation.



Figure 6.2 - Lifetime energy savings by category (GWh)

Figure 6.3 - Priority Scheme Cost Effectiveness (cost in pence per kWh of energy saved, p/kWh) (*the lower the value, the more cost effective the scheme*)



Figure 6.4 - Non-Priority and Innovative Scheme Cost Effectiveness (p/kWh) (*the lower the value, the more cost effective the scheme*)



7. Target Achievement and Incentive Payments

In order to encourage Primary Bidders to bring forward cost-effective schemes and ensure that the objectives of the NISEP are met, the Utility Regulator awards an incentive payment to Primary Bidders that exceed the energy saving target set for each category. There is no incentive paid for simply meeting the target.

As a result of exceeding the GWh targets, incentive payments were awarded to each of the following Primary Bidders. The total incentive payments were **£85,644**, as summarised in table 7.1 below.

Primary Bidder	Amount NISEP spent (£)	Savings achieved (GWh)	Incentive (£)	earned
SGN Natural Gas	683,794	36.388		23,758
firmus energy	1,050,278	68.974		35,920
Fusion Heating	2,397,954	97.257		21,085
Power NI	243,396	59.470		4,881
TOTAL 85.644				85,644

7.1 - Summary of Incentive Payments 2020/21

There has been a notable increase in incentives in 2020/21, compared to the previous year, the bulk of which were awarded to Whole House Solution schemes in the Priority sector. This is mainly as a result of an increase in NISEP spend in this category from $\pounds 2,787,717$ in 2019/20 to $\pounds 4,722,265$, and a substantial increase in heating installs, up by 35%. There were only 8 whole house solution schemes delivered in 2019/20 and this increased to 10 in 20/21. Incentives have also been earned in the Non Priority sector, but they are notably less as the schemes in 2020/21 had much less uptake than the previous NISEP year.

8. Geographical Spread of Domestic Measures

Bar Chart 8.1 below shows the percentage of NISEP interventions per council area in red, and the percentage of NI households within each council area in blue, this demonstrates that NISEP is achieving adequate geographical spread across Northern Ireland. Both columns illustrate the data as a percentage of the national total.

Overall, there continues to be a reasonable spread of measures across many of the council areas. Although Belfast continues to have the highest proportion (at 17%) of measures installed however, there is a reduction of 3% compared to the previous year. In councils, for both Causeway Coast and Glens, and Newry Mourne and Down, the spread of measures remains the same at 9% and 7% respectively. Ards and North Down, Derry City and Strabane, and Mid and East Antrim have all shown an increase of 2% whilst Fermanagh and Omagh have shown the highest increase of 3% in 2020/21. Mid Ulster has also shown a small increase of 1% in comparison to the previous year. Armagh City, Banbridge and Craigavon council and Belfast council have seen the greatest reduction at 3%, followed by Antrim and Newtownabbey at 2%, and Lisburn and Castlereagh at 1%.

For both Derry City and Strabane council and Causeway Coast and Glens council, they continue to show a higher-than-average proportion of measures installed in comparison to population size. There has also been a significant and positive increase in the average proportion of installed measures, compared to population size in both Fermanagh and Omagh council and Mid and East Antrim council areas, by 53% and 26% respectively. We continue to see a lower-than-average proportion of installed measures to population size, in the Mid-Ulster, Ards and North Down and Newry and Mourne council areas. However, it is important to highlight that the measure numbers have increased in all three council areas.

Heating Installations

In terms of other significant changes from 2019/20, the following four council areas have seen a reduction in the number of measures installed in proportion to their respective population size. These are Antrim and Newtownabbey; Armagh City, Banbridge and Craigavon; Belfast; and Lisburn and Castlereagh council areas. Although some of these councils have seen a reduction in the proportion of measures installed, there is a greater spread of measures installed in terms of population size. Most notably, Fermanagh and Omagh has shown a significant increase (by 53%) in comparison to 2019/20 which is a positive change and progress that NISEP is reaching Priority customers across all areas of Northern Ireland.

In 2020/21, in contrast to the previous year, Derry City and Strabane council area received the highest proportion of NISEP heating installs at 19% (as opposed to Armagh City, Banbridge and Craigavon in 2019/20). Fermanagh and Omagh, and Mid Ulster councils had the most significant increase in terms of proportion of heating installs across all council areas, both increasing from 1% to 8%. There was also an increase in % heating installs in Derry City and Strabane, Belfast and Newry, Mourne and Down and Ards and North Down council areas. The most significant reduction in proportion of heating installs was in Armagh City, Banbridge and Craigavon council area accounting for 9% of the heating installs across all councils, compared to 17% (the highest proportion) in the previous year. There was only a small reduction in the council area of Causeway Coast and Glens by 2%, with all other council areas remaining the same or with a small increase.

Insulation Installations

In reference to insulation, there were less significant variations in 2020/21 to the proportion of measures across council areas. Belfast council area remains as having the highest proportion of NISEP insulation measures, with 18%, however this is a marked decrease from 25% in 2019/20. There has been an increase in insulation installs in both council areas Ards and North Down and Mid and East Antrim, from 8% to 10%. In terms of reduction, Antrim and Newtownabbey, Armagh City, Banbridge and Craigavon, and Derry City and Strabane council areas all saw a reduction in the numbers of insulation measures installed. All other council areas either remained the same or had a less notable increase or reduction.



8.1 – Geographic Spread of Measures by Council Area

9. Comparison with previous year

The table below provides a comparison with last year's NISEP.

	2020-21	2019-20
NISEP funding spent (£)	£7,983,508	6,927,807
Total lifetime energy savings (GWh)	481.918	368.632
Lifetime Carbon savings (t)	44,847	46,015
Gross customer benefit (£)	22,246,594	30,153,911
Total incentives earned (£)	85,644	28,160

Overall, the total NISEP spend on schemes at the end of the year was **£7,983,508**, which is higher than the available pot at the start of the NISEP year. This was due to additional funding being allocated to 2020/21 during the year, following confirmation of underspend from 2019/20.

Overall, at year-end, however there was approximately £844k of NISEP funding remaining unspent. As evidenced in the table above, there is a difference of approx. £1m in NISEP funding spent between the two years. There was also a reduction in spend in the Non-Priority Category by £140k, as a result of fewer measures installed in this category. Measures in this category are known to yield high energy savings, carbon savings and gross customer benefit

overall, i.e., LED lighting and variable speed technology, and so this has had a negative impact. To illustrate further, in 2019/20 the Non-Priority category had an outturn of £18m gross customer benefit whereas this reduced to just over £5m in 2020/21.

However, there was a significant increase to energy savings between the two NISEP years (attributed to the Priority Category), and as highlighted in the table above, higher energy savings does not translate to higher carbon savings. This is due to the different carbon intensities of each fuel type, so the mix of fuel types in any given year will impact the energy savings achieved. Also, the carbon factors generally change very little each year, with the exception of electricity, as the grid decarbonises, less carbon savings will be achieved from installations that displace electricity consumption. The increase in energy savings in the Priority Category was mainly as result of a 35% increase in the number of heating installs, in comparison to 2019/20. This also resulted in higher incentives earned by some Primary Bidders.

Gross customer benefit (GCB) as decreased overall, despite increasing from the Priority sector. The substantial decrease from the Non Priority sector, due to low uptake, has led to this decrease overall.

10. Conclusions

In 2020/21, there were twenty-five schemes approved initially, one of which did not go ahead, and three schemes closed during the year due to no uptake. The funds from these schemes were redistributed during the NISEP year to other, more successful schemes to try to maximise in-year spend and associated energy savings.

The overall NISEP spend was £7,983,508 which was £1,055,701 more than in 2019/20.

Energy Saving Trust and The Utility Regulator periodically review spend and committed funds via the 5 and 8 month interim reporting process. This process facilitates the opportunity for funds to be reallocated between schemes, if deemed appropriate. However, several varying factors impacted overall spend. These included the impact of COVID-19, where installations were cancelled across schemes due to social distancing / isolation requirements, as well as Primary Bidders being impacted with staff absence, and because of the impact of Brexit on causing uncertainty on investment decisions.. This resulted in an approximate £844k underspend at year end. This however was less than the previous year's underspend.

Overall, there were **22,740** measures installed, which equates to **8,025** fewer measures when in comparison to the previous year, mainly due to the low uptake of measures under commercial schemes and LEDs in Domestic schemes.

The gross customer benefit total translates as one pound of NISEP funding provided this year, providing £2.79 of Net Present Value lifetime benefits.

Priority Schemes

Priority funding contributed to **16,260** energy efficiency interventions. This amounts to a decrease of 2,642 measures to the previous year. COVID-19 continued to have an impact in 2020/21 with this reduction in measures mainly as a result of less LEDs being installed in properties due to COVID-19 restrictions.

The Priority Category represented approximately 81% of the overall energy savings. This is a higher proportion than in 2019/20 and is primarily due to a lower uptake of measures in the Non-Priority and Innovative Category in 2020/21. A higher proportion of funding was also spent in the Priority category where demand was greatest. Total energy savings are higher than in 2019/20, despite the reduced number of measures installed (less LEDs). This increase in savings can mainly be attributed to an increase in the number of heating measures (by approx. 35%).

The importance of the 'whole house solution' (WHS) approach continues to be reemphasised to all Primary Bidders for priority schemes. It can achieve much greater efficiency, addressing many elements of a home's energy use at once. To maximise thermal comfort and customer satisfaction, to offer best value for money, to ensure maximum energy savings and to reduce bills for the householder, Energy Saving Trust and The Utility Regulator will continue to highlight the importance of the 'whole house solution' approach to all Primary Bidders. Customers should always be made aware of the benefits of insulation measures. Energy Saving Trust request that Primary Bidders report on the levels of WHS packages installed, through the interim reporting schedule.

The Framework Document also highlights that when a heating system is being installed, all insulation measures included in the scheme submission should also be installed (where suitable for the property type and if required). Where a number of subcontractors are used, Primary Bidders must also carry out a coordinating role to ensure that the maximum number of measures are installed as efficiently as possible to the maximum benefit of the property, including adequate ventilation given the range of measures installed. For whole house solution installations, 100% quality monitoring checks for both heating and insulation must be completed and signed off before a claim is submitted.

Energy Saving Trust has seen higher numbers availing of insulation measures under WHS schemes. COVID-19 has impacted the level of uptake; however, it is expected that we will continue to see an increase in properties availing of the WHS package in future NISEP years.

Non-Priority and Innovative Schemes

The Non-Priority Category had a significantly lower spend and gross customer benefit to the previous year. There were **6,480** measures installed (mainly LEDs) which was 5,383 less than in 19/20 with only 4% of the total NISEP funding spent in this category (down from 7% in 2019/20).

There continues to be high underspend in this category most notably within the commercial schemes. Reasons for this underspend, mainly relate to funding being reserved for commercial applications. Projects take a longer period to plan and complete, and the current NISEP financial year timeframe continues to provide challenges for the commercial sector. As a result, applications do not progress as swiftly as domestic applications, which then leads to low uptake in this category and underspend at year-end.

Energy savings, as a result, continue to be impacted overall, where the Priority category delivers higher proportion of energy savings compared to the Non-Priority category.

In relation to domestic measures within the Non-Priority Category, there has been a slight reduction in the number of Non-Priority domestic insulation measures installed.

There was an amendment to the Framework Document in 2020/21 to include High Heat Retention Storage heaters, under the innovative category, to cater for households that are off gas and to encourage electrification of heat. However, the innovative category continues to remain undersubscribed, with only two innovative schemes submitted in 2020/21, both of which were approved, however one did not proceed. Energy Saving Trust and The Utility Regulator will continue to encourage innovative schemes to be submitted, which would help bring forward emerging but proven domestic or commercial technologies that provide a better energy efficiency performance than 'standard' measures.

Geographical Spread

Overall, there has been a greater spread of measures across many of the council areas. Although Belfast continues to have the highest proportion of measures installed, the overall proportion continues to decrease. In contrast to the previous year, Derry City and Strabane council area received the highest proportion of NISEP heating installs. In reference to insulation, there were less significant variations, where Belfast council area remains as having the highest proportion. However, this council area has had the greatest proportion reduction in comparison to 2019/20.

Appendix 1: Summary of participating NISEP schemes

PRIORITY SCHEMES

FUS 20 01 MP Energy Plus

This was a Priority Whole House Solution Scheme aimed at households (owner-occupied and private rented) which met set vulnerability criteria. The scheme provided a new energy efficient heating system plus loft and/or cavity wall insulation measures to households whose properties had existing solid fuel heating system or no central heating or an old, inefficient, or broken oil or LPG Boiler. Economy 7 conversions were on a case-by-case basis. Eligible customers were offered a fully funded grant to enable customers who live in the Phoenix Natural Gas Greater Belfast and East Down Licence areas to upgrade their existing heating system was also treated with the heating additive and each customer was offered up to 4 LEDs, a water widget, reflective radiator panels and smart heating controls.

In total 361 properties received measures through this scheme. Of these 361 properties, there were 18 properties that availed of a 'whole house solution' package of heating, loft insulation and cavity wall insulation measures. There were 92 other properties that received heating and either cavity wall insulation or loft insulation.

Measures Summary

Loft insulation	96
Cavity wall insulation	34
Heating System with Heating Additive	361
LEDs	506
Smart Heating Controls	150
Reflective Radiator Panels	212

FUS 20 02 MP Energy Plus – Efficient Oil

This was a Priority Whole House Solution Scheme aimed at households (owner-occupied and private rented) which met set vulnerability criteria. The scheme provided a new energy efficient heating system plus loft and/or cavity wall insulation measures to households whose properties had no heating (i.e., no heating system in place or a heating system which upon survey, with documented evidence, was deemed to be beyond viable economic repair), Economy 7 heating (on case-by-case basis) or solid fuel heating. Eligible customers were offered a new oil energy efficient heating system. A fully funded grant was available for a heating system was also treated with the heating additive and each customer was offered up to 4 LEDs, a water widget, reflective radiator panels and smart heating controls.

In total 76 properties received a replacement heating system through this scheme. Of these properties, there were 2 properties that availed of a 'whole house solution' package of heating, loft insulation and cavity wall insulation measures. There were 17 properties that received heating and either cavity wall insulation or loft insulation.

Measures Summary

Loft insulation	18
Cavity wall insulation	3
Heating System with Heating Additive	76
LEDs	252
Reflective Radiator Panels	32
Smart Heating Controls	1

FUS 20 03 MP Energy Saving Home Assist

This was a Priority Whole House Solution Scheme aimed at households (owner-occupied and private rented) which met set vulnerability criteria. The scheme provided a new energy efficient heating system plus loft and/or cavity wall insulation measures whose properties had existing solid fuel heating system or no central heating or an old, inefficient, or broken oil or LPG Boiler. Economy 7 conversions were on a case-by-case basis. Eligible customers were offered a new gas energy efficient heating system. The Scheme offered a 50% Part-Funded grant to enable customers who live in the Phoenix Natural Gas Greater Belfast and East Down Licence areas to upgrade their existing heating systems to Natural Gas. The Scheme also offered these customers a fully funded grant to install or top-up loft and/or Cavity Wall Insulation. Each heating system was also treated with the heating additive and each customer was offered up to 4 LEDs, a water widget, reflective radiator panels, and smart heating controls.

In total 159 properties received a replacement heating system through this scheme. There were 12 properties that availed of a 'whole house solution' package of heating, loft insulation and cavity wall insulation measures and 38 properties that received heating and either cavity wall insulation or loft insulation.

Loft insulation	47
Cavity wall insulation	15
Heating System with Heating Additive	159
LEDs	476
Reflective Radiator Panels	43
Smart Heating Controls	52

FUS 20 04 MP Housing Association Energy Saver

This was a Priority Whole House Solution Scheme that installed energy efficient heating and insulation measures in Housing Association (HA) properties with solid fuel, Economy 7 (on a case-by-case basis) or, upon survey with documented evidence, with an old and inefficient heating system (15 years or older). This scheme also improved the thermal quality of homes in the Housing Association stock by offering loft and cavity wall insulation measures where required. Each heating system was also treated with a heating additive and each customer was offered up to 4 LEDs and a water widget. A maximum grant of £750 per property was offered for heating and £150 towards both cavity wall and loft insulation. The HA met the remaining costs in excess of the grant value for each installation.

In total 135 properties received measures through this scheme. Of these 135 properties that received a new heating system, there were no properties that received a 'whole house solution' package as insulation was not required.

Measures Summary

Heating System with heating additive 135

SGN 20 01 MP Warm at Home Plus

This was a Priority Whole House Solution Scheme offering a fully funded natural gas heating system (with heating additive) and insulation measures, including cavity wall and loft insulation. Customers were offered LED light bulbs and a hot water tank jacket. To qualify for the scheme, customers were required to meet set eligibility criteria, which included being a homeowner or private tenant within prescribed income brackets. Low-income households within SGN Natural Gas network area with Economy 7 (on a case-by-case basis), Solid Fuel heating, no central heating or an old (over 15 years) or broken beyond viable economic repair oil boiler were targeted.

In total 240 properties received measures through this scheme. There were 11 properties that received the 'whole house solution' package of heating, loft insulation and cavity wall insulation measures and 121 properties that received heating and either loft insulation or cavity wall insulation.

Loft Insulation	129
Cavity Wall insulation	14
Heating system with Heating Additive	240
LEDs	918

FIR 20 01 MP Home Comfort Plus

This was a Priority Whole House Solution scheme that targeted owner-occupied householders that met set vulnerability criteria. To be eligible customers had to be within the firmus energy gas network area and have Economy 7 (on a case-by-case basis), solid fuel, LPG (boilers over 15 years old), oil (boilers over 15 years old) or no heating, including oil boilers broken beyond viable economic repair. This was a fully funded scheme. The measures offered were a fully controlled natural gas heating system, loft/cavity wall insulation, a remote smart heating controls and up to 4 LED lightbulbs.

In total 227 properties received measures through this scheme. There were 25 properties that received a 'whole house solution' package of heating, loft insulation and cavity wall insulation measures and 103 properties that received heating and either loft insulation or cavity wall insulation.

Measures Summary

Loft insulation	110
Cavity Wall Insulation	43
Heating System with Heating Additive	227
LEDs	782
Water Widgets	51
Smart Heating Controls	98

FIR 20 02 MP Home Comfort 50/50

This was a Priority Whole House Solution Scheme aimed at homeowners and private tenants who met set income criteria. The scheme offered a grant of 50% off the total cost of a natural gas central heating system and fully funded insulation measures including cavity wall and loft insulation. Customers were also offered LED light bulbs and remote smart heating controls. Low-income households within the firmus energy gas network area with no central heating, Economy 7 (on a case-by-case basis), Solid Fuel heating or an old Oil or LPG heating system (where the boiler must be over 15 years or broken beyond viable economic repair) were targeted.

In total 206 properties received measures through this scheme. There were 36 properties that received a 'whole house solution' package of heating, loft insulation and cavity wall insulation measures and 125 properties that received heating and either loft insulation or cavity wall insulation.

Loft Insulation	141
Cavity Wall Insulation	56
Heating system with Heating Additive	206
LEDs	893
Water Widgets	16
Smart Heating Controls	51

OKPE 20 01 MP Better Energy Homes Plus

The Better Energy Home Plus Scheme was a Priority Whole House Solution scheme aimed at low-income owner-occupied or private tenants. It was a fully funded scheme where no customer contribution was sought. Households with no central heating, Economy 7 (on a case-by-case basis), solid fuel heating or an old oil or LPG heating system (where the boiler must be over 15 years old or broken beyond viable economic repair) were targeted. The scheme offered a fully funded natural gas or oil heating system (with heating additive) and fully funded cavity wall and loft insulation, energy efficient lighting and a hot water cylinder jacket.

In total 94 properties received measures through this scheme. Of these 94 properties, there were 17 properties that received a 'whole house solution' package of heating, loft insulation and cavity wall insulation measures. There were 29 properties that received heating and either loft insulation or cavity wall insulation.

Measures SummaryLoft insulation43Cavity wall insulation20Heating Install with Heating Additive94Hot Water Tank Jacket2LEDs376

OKPE 20 02 MP Better Energy Homes Cashback

The Better Energy Homes Cashback Scheme was a Priority Whole House Solution scheme aimed at low-income owner occupied or private tenants. It was a 50% customer contribution scheme. Households with no central heating, Economy 7 (on a case-by-case basis), solid fuel heating or an old oil or LPG heating system (where the boiler must be over 15 years old or broken beyond viable economic repair) were targeted. The scheme offered a 50% NISEP grant towards a natural gas or oil heating system (with heating additive) and fully funded cavity wall and loft insulation, energy efficient lighting and a hot water cylinder jacket.

In total 23 properties received measures through this scheme. Of these 23 properties, there were 3 properties that received a 'whole house solution' package of heating, loft insulation and cavity wall insulation measures. There were 12 properties that received heating and either loft insulation or cavity wall insulation.

Loft insulation	13
Cavity wall insulation	5
Heating Install with Heating Additive	23
LEDs	92

PNI 20 01 MP Cosy Homes

This was a Priority Whole House Solution Scheme that installed energy efficient heating and insulation measures in Housing Association (HA) properties to raise the standard of heating systems and the thermal quality of homes. Properties with solid fuel, Economy 7 (on a caseby-case basis) or, upon survey with documented evidence, with an old and inefficient heating system (15 years or older) were eligible. A maximum grant of £1,000 per property was offered for heating and £150 towards both cavity wall and loft insulation. The HA met the remaining costs in excess of the grant value for each installation. Each property was offered up to 2 LEDs (depending on requirements) with each tenant given energy saving advice.

Overall, 103 properties availed of a new heating system, with 3 properties availing of loft insulation only and 1 property availing of cavity wall insulation only.

Measures Summary

Loft insulation	3
Cavity wall insulation	1
Heating Install	103
LEDs	206

ESL 20 01 IP Thermal Comfort

This was a Priority Individual Measures scheme that offered fully funded Cavity Wall and Loft Insulation measures. It targeted private tenants or owner-occupied households that met the scheme criteria. A fully funded package of measures was available including cavity wall and/or loft insulation measures, a hot water cylinder jacket and up to 4 LEDs, if required.

Overall, 421 loft insulation and 782 cavity wall insulation measures were installed.

Measures Summary	
Loft insulation	421
Cavity wall insulation	782
LEDs	220
Hot Water Cylinder jackets	31

ESL 20 03 IP Housing Association Comfortable Living

This was a Priority Individual Measures scheme designed to give grant assistance to Housing Association properties, with a NISEP grant of £200 per cavity wall and loft insulation measure. The maximum grant assistance available per property was £400.

Overall, 9 cavity wall insulation measures were installed, but no loft insulation was installed, as it was not required.

Measures Summary

Cavity wall insulation 9

WFL 20 02 IP Homewarmer Plus

This was a Priority Individual Measures scheme that offered fully funded Cavity Wall and Loft Insulation measures. It targeted private tenants or owner-occupied households that met the scheme criteria. A fully funded package of measures was available including cavity wall and/or loft insulation measures, a hot water cylinder jacket and up to 4 LEDs, if required.

Overall, 257 loft insulation and 261 cavity wall insulation measures were installed.

Measures Summary

Loft Insulation	257
Cavity Wall Insulation	261
Hot Water Cylinder Jackets	7
LEDs	1,092

WORK 20 01 IP Keep Warm Scheme

This was a Fully Funded Priority Individual Measures scheme, where applicants were required to meet set eligibility criteria. The overall aim of the scheme was to provide loft or cavity insulation to those households which qualified for the scheme. Up to 4 LEDs and a hot water cylinder jacket were also offered to every customer. The scheme was aimed at priority customers; no customer contribution was sought from customers.

Overall, 585 loft insulation and 234 cavity wall insulation measures were installed.

Measures Summary

Loft insulation	585
Cavity wall insulation	234
Hot Water Cylinder jackets	94
LEDs	2,109

KING 20 01 M P NI Home Insulation Scheme

This was a Fully Funded Priority Individual Measures scheme, where applicants were required to meet set eligibility criteria. This scheme offered cavity wall insulation, loft insulation, tank jackets and low energy lighting to owner occupied properties. The scheme was aimed at priority customers; no customer contribution was sought from customers.

Loft insulation	306
Cavity wall insulation	117
Hot Water Tank Jacket	19
LEDs	468

NON-PRIORITY SCHEMES

ESL 20 02 NP £250 Insulation Cashback

This Non-Priority domestic scheme was designed to give grant assistance to insulate the cavity wall and the loft of a home. Homeowners or private tenants were offered an up-front discount on both cavity wall and loft insulation. A minimum installation value of £300 applied for either loft or cavity wall installation work to qualify for the grant. The customer received a maximum cashback of £250 on the installed costs for each type of insulation. The maximum grant available, where both loft and cavity wall insulation were installed, was £500.

There were 531 cashbacks provided.

Measures Summary

Loft insulation	93
Cavity wall insulation	438

WFL 20 01 I NP Keeping You Warmer

This Non-Priority domestic scheme was designed to give grant assistance to insulate the cavity wall and the loft of a home. Homeowners or private tenants were offered an up-front discount on both cavity wall and loft insulation. A minimum installation value of £300 applied for either loft or cavity wall installation work to qualify for the grant. The customer received a maximum cashback of £250 on the installed costs for each type of insulation. The maximum grant available, where both loft and cavity wall insulation were installed, was £500. Hot Water Tank Jackets were also offered to customers.

There were 34 cashbacks provided.

Measures SummaryLoft insulation8Cavity wall insulation26LEDs36

PNI 20 03 LNP LED Lighting

This Non-Priority commercial lighting scheme offered a grant of 20% towards the cost of replacing the original metal halide/ SON / fluorescent / Tunsgten / PL and 2D installations with LED luminaries so that the connected lighting load reduced. Dimming and movement detection options were also on offer. Businesses targeted included; Retail (high street shops / shopping centers), Offices, Manufacturing (production/warehouses), Leisure (gyms/activity centers), Hospitality (pubs/hotels), Agriculture (farms), Transport (ports/haulage depots) and Education (schools/colleges/universities).

In total 5,848 measures were installed.

Measures Summary LEDs 5,848

PNI 20 04 O NP Intelligent heating controls

This Non-Priority commercial scheme offered a grant of 20% towards the cost of design and installation of an intuitive heating management system retrofitted to provide individual control of heating times and temperatures within each room. Businesses targeted included Hotels and Tourism, Care Homes, Offices and Education.

In total 3 measures were installed.

Measures Summary

Intelligent heating controls 3

PNI 20 05 O NP Variable Speed Technology

This was a Non-Priority Commercial scheme that offered a grant of 20% towards the cost of replacing a single Variable Speed Compressor (VSC) or Variable Speed Drive (VSD) with a new variable speed model. An Air leak detection/repair survey was also offered. Commercial customers who used motors for ventilation, water circulation and air compressors were targeted.

In total 4 Variable speed technlogies were installed which included 1 VSD and 3 VSCs.

Measures Summary

Variable speed technology 4

PNI 20 06 O NP Voltage Optimisation

This Non-Priority Commercial scheme offered a grant of 20% towards the cost of installation of Powerstar's voltage optimisation technology was offered. This included a transformerbased system used to optimise the characteristics of the current supplied at the source according to current characteristics required at the load. The businesses targeted included; industrial, manufacturing, engineering, leisure and hospitality.

This scheme closed during the 2020/21 NISEP year due to no uptake.

PNI 20 07 O NP Robox Energy Screw Compressor

This was a Non-Priority Commercial scheme that offered a 20% grant for replacing rotary lobe blowers with new screw blowers which combine a screw compressor, a permanent magnetic motor, and an integrated frequency convertor which enable them to perform at high efficiency, even when operating at lower speeds. The businesses targeted included; waste water treatment works, food manufacturing and drinks manufacturing

This scheme closed during the 2020/21 NISEP year, due to no uptake.

PNI 20 08 O NP Heat Recovery

This Non-Priority Commercial scheme offered a grant of 30% towards the installation of heat exchangers to existing compressed air systems/air conditioning/refrigeration, which recycle heat to save energy and reduce costs. The businesses targeted included; engineering, textile, manufacturing, quarries and food.

This scheme closed during the 2020/21 NISEP year, due to no uptake.

PNI 20 09 O NP Heat Pumps

This Non-Priority Commercial Innovative scheme offered a grant of up to 20% towards the installation of heat pumps to existing compressed air systems/air conditioning/refrigeration, which recycle heat to save energy and reduce costs. The scheme was to target all business users in Northern Ireland with the aim of largely displacing oil or gas by installing heat pumps.

This scheme was approved however did not proceed in the 2020/21 NISEP year.

FUS 20 05 M NP Housing Association – Efficient Electric

As detailed in the Framework Document, Innovative schemes (ring fenced in the Non-Priority Category) may be designed to target either priority or non-priority or both customer groups. This was a Priority Innovative scheme aimed at Housing Associations where customers met set vulnerability criteria and had old inefficient Economy 7 Heating Systems. The scheme offered a Part-Funded grant of £900 to the Housing Association to incentivise them to upgrade their vulnerable tenants' existing Economy 7 Electric Heaters with High-Efficiency Electric Storage heaters. The scheme also offered the Housing Association a grant of up to £150 to install or top-up loft and/or cavity wall insulation in these customers' homes and up to 4 LEDs and a water widget. The balance of the costs of installing heating and insulation measures over and above the NISEP grant was met by the Housing Association.

There were 24 households that availed of this scheme to upgrade their Economy 7 electric heaters to High Heat Retention Storage Heaters, none of the properties required insulation or any of the additional measures offered.

Measures Summary

High Heat Retention Storage Heaters 24